AUTOMOTIVE FINISHES

GENESIS® 3.5

Low VOC Acrylic Urethane

PRODUCT DATA

PRODUCT DESCRIPTION:

Genesis® 3.5 Low VOC Acrylic Urethane is extremely durable, provides high gloss and is chemical/solvent resistant. Genesis® 3.5 can be air-dried or force dried for a urethane-tough enamel that is ideal for OEM, Fleet, Truck, and special vehicle finishing. Genesis® demonstrates many graffiti resistant properties that make it ideal for industries such as: airline ground support equipment, the waste industry, beverage industry, DOT, and public transportation equipment. Genesis® 3.5 offers excellent hiding with lead and chromate free formulas. It is available in many intermix formulas including fleet specified colors.

NOTE: Genesis® 3.5 has many lead and chromate formulas available for those customers that are not in lead/chromate restricted areas. Please refer to product intermix labels or MSDS for lead/chromate information.

TECHNICAL DATA:

• Mixing ratio by volume		3:1
• Max VOC @ 3:1	VOC Total	3.5 lbs/gal, 420 g/l
	VOC less exempt	3.5 lbs/gal, 420 g/l
• Viscosity (sprayable) Gardner #2 Zahn Cup (ISO calibrated)		
	Solids 18-22 sec.	Metallics 23-25 sec.
• Flash point PMCC (white)		80°F
• Coverage @ 1 mil dry (white)		875 sq. ft./gallon
• Recommended min. dry film thickness (2 coats)		2.0-2.5 mils
• Gloss	60° (solids/metallics)	92/85
	20° (solids/metallics	85/80
• DOI		Excellent
• Pencil Hardness	at 48 hours	H
	at 2 weeks	2H
- Florida Black Box (gloss retention) @ 5 degrees South exposure for 2 years		90%
• Dielectric Strength		2000 volts/mil
• Lead/Chromate color formulas		Refer to MSDS

• Performance after one week air dry	
- Impact resistance (80 in/lbs)	
Direct	Pass
Reverse	Pass
- Flexibility (1/8" conical mandrel)	Pass
- Solvent resistance (10 double rubs)	
(MEK/Xylene/Gasoline/Diesel/Oil)	No effect
- Chemical resistance (24 hr. covered contact)	
10% Hydrochloric acid	No effect
10% Sulfuric acid	No effect
10% Ammonium hydroxide	No effect
10% Phosphoric acid	No effect
10% Acetic acid	No effect
10% Sodium hydroxide	No effect
Antifreeze	No effect
- Salt spray resistance -500 hrs*	No effect
- Humidity resistance - 250 hours*	No effect

* Over properly treated and primed metal

SURFACE PREPARATION:

Bare Substrates*: Steel, Galvanized Steel, Aluminum or Fiberglass

**Note: With the inconsistencies of substrates, consult your local SHERWIN–WILLIAMS Representative for system recommendations and substrate testing.*

1. Solvent clean with SHER-WILL-CLEAN® Solvent Cleaner R7-K156 or AQUA-MATE® Low VOC Surface Cleaner W4-K157 and wipe dry with a clean, dry cloth.
2. Mechanically abrade all bare metal. For hot-rolled steel, a media blast is required to remove any surface impurities.
3. Solvent clean with SHER-WILL-CLEAN® Solvent Cleaner R7-K156 or AQUA-MATE® Low VOC Surface Cleaner W4-K157 and wipe dry with a clean, dry cloth. For hot-rolled steel, proceed to step #4.
4. Apply 2-3 medium coats of GBP® Etching Filler E2-G980 or one double coat of CORROSION SHIELD® E2-G973. Check local regulations to verify etching primers are VOC exempt. Or, treat bare steel with MET-L-ETCH® Steel Cleaner W4-K288 followed by MET-L-MATE® Phosphate Conversion Coating W4-K289.
5. Follow with appropriate Sherwin-Williams primer. Note: Do not use Flex Grip™ E2A936/E2W938 over E2G973.

Prepainted Substrates:

1. Wash surfaces with a mild detergent in hot water. Rinse well and wipe dry with a clean cloth.
2. Solvent clean with SHER-WILL-CLEAN® Solvent Cleaner R7-K156 or AQUA-MATE® Low VOC Surface Cleaner W4-K157 and wipe dry with a clean, dry cloth.
3. Grind off paint and remove all rust. Fill as needed using a SHERWIN-WILLIAMS body filler. Allow body filler to tack up and shape as needed. Body filler must be cured before priming.
4. Sand repair area and featheredge using 80, 180, 280 and finish with 320 grit treated sandpaper on a random orbital sander. Use SHER-WILL-CLEAN® Solvent Cleaner R7-K156 or AQUA-MATE® Low VOC surface Cleaner W4-K157 to remove sanding residue before recoating.
5. Apply 2-3 medium coats of GBP Etching Filler E2-G980 or one double coat of CORROSION SHIELD® E2-G973 to any bare metal and featheredge area. Check local regulations to verify etching primers are VOC exempt. Or, treat bare steel with MET-L-ETCH® Steel Cleaner W4-K288 followed by MET-L-MATE® Phosphate Conversion Coating W4-K289.
6. Fill as needed using an appropriate Sherwin-Williams primer. Note: Do not use Flex Grip™ E2A936/E2W938 over E2G973. Block sand with 180 to 280 grit treated sandpaper.
7. Finish sand repair area with 320 grit treated sandpaper on a random orbital sander.
8. Prep entire blend area or panel by water sanding with 1000-1200 grit or scuff with gray scuff pad and USP-90 Scuffing Gel.
9. Re-clean thoroughly with R7-K156 or W4-K157.
10. For best results on larger repairs, seal the area to be painted with an appropriate Sherwin-Williams primer.

(For the above products refer to the appropriate product data page for complete information.)

MIXING:

1. Stir or shake Genesis® 3.5 Low VOC thoroughly before mixing.
2. Mix by volume, 3 parts Genesis® 3.5 VOC Color with 1 part Genesis® Hardener GH1091. Stir thoroughly and strain before use.
   Pot life: 2 Hours.
   OR,
   To improve atomization and blending without affecting VOC, mix by volume, 3 parts Genesis® 3.5 VOC Color, 1 part Genesis® Hardener GH1091 and up to 1 part Genesis® Reducer GR1088. IMPORTANT: Color match may be affected using this mixing scenerio. Before painting, spray a test card and compare the color to the color standard or unit to be repaired.
   Pot life: 3 hours.
3. One of the following reducers are included in the intermix formula. Contact your local Sherwin-Williams representative for details.

Reducer	Temperature Range
GR-1070	50-75°F
GR-1073	75-85°F
GR-1086	85°F+

   To improve flow/leveling, additional reducer may be added according to the chart below.
4. To speed tape time, add up to 3 ounces of Genesis® Accelerator GA-1097 per sprayable gallon.
   IMPORTANT: Pot life will be reduced to 1 hour. See chart below for VOC limitations.
5. If fisheyes are a problem, add 1-2 ounces of The LEVELER® Silicone Additive V3-K780 per sprayable gallon of Genesis® 3.5 Color. This will not exceed 3.5 lb/gal VOC.

To maintain 3.5 VOC Compliance:

If the VOC of GENESIS® 3.5 is:		Add up to the following amounts of Genesis® Reducer		OR Add up to the following of combined ounces to a RTS gallon	
VOC (less Exempt) of Intermix Color	VOC RTS (3 : 1 Mix)	# of ounces RTS gallon	Approx. % Reduction	Accelerator GA1097	AND Genesis® Reducer
3.60	3.25	8	6	3	4.5
3.65	3.29	6.5	5	3	3
3.70	3.33	5.5	4	3	2
3.75	3.37	4	3	3	0.5
3.80	3.41	3	2	2.5	0
3.85	3.44	2	1.5	1.5	0

APPLICATION:

Overall:

1. Adjust air pressure at the gun to 55-65 psi for siphon, gravity or pressure feed (adjust pot pressure to 5-10 psi for 8-15 fluid unces per minute delivery).
2. For Pressure/Siphon feed, apply 2 medium coats at a gun distance of 8-10 inches. Spray to hiding. For HVLP, apply 1 full wet coat with 50% overlap. Recommended minimum dry film thickness is 2.0-2.5 mils.
3. Clean spray gun immediately after use with a quality lacquer thinner.

Repair:

Blending Clear Reduction and Activation

Mix by volume 3 parts GT1004 with 1 part GH1091 hardener to 3 parts GR1073 and stir thoroughly. For best results, use a two gun set up to blend clear. Gun #1 for color and Gun #2 for blending clear.

Repair Procedure

Step 1 Mask the adjacent panels or blend areas with masking paper. Only expose the repair area.
Step 2 Apply color over repair area until hiding is achieved, allow 10 minute flash between coats. The second or last coat extends out into blend area.
Step 3 Immediately after last coat of color, using a lower air pressure, apply one or two light coats of blending clear over the wet blended color to melt blend edge arcing the spray gun at the end of each stroke.
Step 4 Using a clean gun, melt in edge of clear with GR-1070. Spray 2 to 3 light coats at 6 to 8 pounds cap pressure or 25 psi using half trigger. NOTE: Do not spray into unsanded areas.

Buffing Blend Area

- Allow finish to cure.
- If sanding is needed for dirt or smoothing the blend area, use 2000 to 2500 grit paper wet.
- Buff blend area by machine with UPC-10 Polishing Cream or a quality microfinishing compound followed by machine glaze UMG-30 or equivalent. Hand glaze if needed.

Equipment:

- Pressure Feed:

Gun	JGA 502
Fluid Tip	FF or FX
Air Cap	797
Fluid Delivery	8-14 oz/min
Atomizing air psi	60-70 psi @ gun
Gun Distance	8-10 inches

- **HVLP:**

Gun	DeVilbiss OMX 501	SATA JET K	Kremlin M21
Fluid Tip	FF (.055)	1.2 mm	209 (.035)
Air Cap	46	--	LP23
Fluid Delivery	12-15 oz/min	8-15 oz/min	10-12 oz/min
	15 psi/pot	8-10 psi/pot	8-12 psi/pot
Air Pressure	65 psi/gun	40-55 psi/gun	45-55 psi/gun
	8-10 psi/cap	10 psi/cap	8-10 psi/cap
Gun Distance	8-10”	8-10”	8-12”

DRYING SCHEDULE:

Dry times are based on the recommended dry film thickness of 2.0 - 2.5 mils; thicker films will extend drying times.

- Air dry times @ 75°F and 50% Relative Humidity:

	Unaccelerated	Accelerated (3 oz. GA-1097 per sprayable gal)
- Dust free	2-3 hours	1 hours
- Tack free	6-7 hours	1-2 hours
- Tape free	24 hours	4-5 hours

- Force dry times:

Temperature	Tape free	Tape Free with 2 oz GA-1097 per sprayable Gallon
140°F	80-120 minutes	30 minutes
160°F	60-80 minutes	---
180°F	45-60 minutes	---

Note: Infra-Red Recommendation: 10 minutes on low for flash and 20 minutes on high or until firm. Lamp should be no closer than 36 inches

NOTES:

- Decals may be applied after air-drying 72 hours at 75°F. Lower temperatures, heavy film thickness, poor air movement, thick decals, foil-based decals, etc., will extend the 72 hour dry time before decal may be applied. Refer to your local Sherwin-Williams Representative for recommendations.

PRODUCT AT-A-GLANCE

PRODUCT **Genesis® 3.5 Low VOC Acrylic Urethane** **GC Series**

PRODUCT DATA

USE

- Ideal for OEM, Fleet, Truck, Special Vehicle finishing.
- Provides a high gloss, extremely durable, chemical/solvent resistant finish.
- Resists marring, stone chips, harsh environments

SUITABLE SUBSTRATES

- AQUA II™ Waterborne W8A2500*
- G.B.P.® Etching Filler E2G980†
- PRIME-SHIELD™ E2A820/R822/W823
- FLEX GRIP™ 3.5 VOC Epoxy Primer E2A936/E2W938
- Sher-Jet™ E2A55
- Sher-Lok® E2H935
- Sher-Lok® E2H935P with E2Z945
- ULTRA-FILL II® Primer-Sealers E6H59/E6C61
- ULTRA-FILL II® Primer-Surfacer P6A48/P6H49

**VOC Compliant at 2.0 lbs/gal (240 grams/liter)*

†Consult local regulations for VOC requirements

SURFACE PREPARATION

- **Wash** surfaces with a mild detergent in hot water. Rinse well and wipe dry with clean cloth.
- **Solvent clean** with Low VOC Surface Cleaner W4K157 and wipe dry with a clean cloth.
- **Sand** all areas to be refinished and featheredge all broke film areas.
- **Treat** bare metal with a Sherwin-Williams conditioner or etching primer. Check local regulations to verify etching primers are VOC exempt.
- **Prime** with Sherwin-Willliams primer.

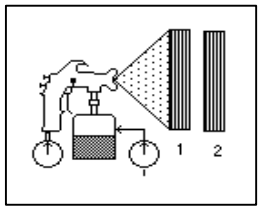
MIXING

- Stir or shake Genesis® 3.5 Low VOC color thoroughly before mixing.
- Mix by volume 3 parts of Genesis® 3.5 Low VOC Color with 1 part hardener GH1096.
- Pot life: 2 hours

3 Mixed Color + 1 Hardener GH1091

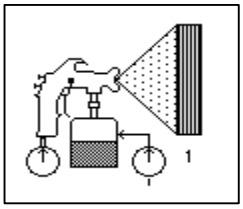
APPLICATION

Pressure Feed/Siphon Feed*
Apply 2 medium coats.
Allow each to become hand slick



Air pressure: 55-65 psi, 5-10 psi pot pressure
Fluid delivery: 8-15 oz/min.

HVLP*
Apply 1 full wet coat
With 50% overlap.



8-10 psi at the cap
Fluid delivery: 8-15 oz/min.

***See APPLICATION on previous page for complete equipment recommendation.**

RECOAT

- Decals may be applied after 72 hours. Lower temperatures, heavy film thickness, poor air movement, thick decals, foil based decals, etc., will extend the dry time before the decal may be applied.
- May be recoated at any time with itself. Must be scuffed or sanded after 24 hours.
- Refer to your local Sherwin-Williams Representative for recommendations.

NOTES

- To speed tape time, add up to 3 ounces Genesis® Accelerator GA1097 per sprayable gallon
- Recommended minimum dry film thickness is 2.0-2.5 mils.

PERSONAL PROTECTION

- Read all label directions before use.
- Refer to MSDS for specific information.
- Wear positive-air respirator PS-90006 or 90012 when mixing and applying.
- Wear a NIOSH approved dust particulate mask PS-90015 when sanding.
- Wear safety goggles PS-90017, coveralls PS-90026, and latex gloves PS-90022 when using product.

To learn more about Sherwin-Williams Automotive Products, visit our Web site at www.sherwin-automotive.com

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